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Solid-phase radioimmunoassay for detection of staphylococcal antigen in serum of rabbits with endocarditis due to *Staphylococcus aureus*.

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To aid in the rapid diagnosis of staphylococcal infection, a solid-phase radioimmunoassay for *Staphylococcus aureus* antigen was developed and evaluated in rabbits with staphylococcal endocarditis. Test specimens containing antigen were added to polystyrene tubes coated with antibody to *S. aureus*. Antigens immobilized on the tube were detected by adding radiolabeled antibody to *S. aureus*. Sensitivity for antigen was 0.312 microgram/ml in buffer and 1.25 microgram/ml in 50% rabbit serum. Cross-reactions were not observed with antigens extracted from streptococci; however, antigen extracted from *Staphylococcus epidermidis* (which contained ribitol-teichoic acid) could also be detected at low concentrations. Antigen was detected in each of 12 rabbits with *S. aureus* endocarditis but not in control rabbits. This assay is sensitive, specific, reproducible, and capable of detecting antigens in the serum of rabbits with endocarditis.

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